

Environmental engineering in action

CYCLEFOAM®



Advantages

- φ Exceptional noise reduction characteristics.
- φ Absorbs as well as reflects noise, unlike standard panel noise barriers which mainly reflect noise.
- φ Provides a barrier against highway dust, fumes and light from vehicles.
- φ Modular construction resulting in quick and easy installation.
- φ Low maintenance (water and dirt repellent) and can be high pressure cleaned with water and soft detergents.
- φ Appearance available in a wide range of colours.
- φ Graffiti resistant with Decoroc® coating.
- φ Very durable with extremely long life-time.
- φ Flexibility gives seismic and earthquake resistance.
- φ Self extinguishing fire resistance according to EN 1794-2.
- φ Environmentally friendly because panels are manufactured from recycled material and is recyclable.
- φ Curves and angles possible.
- φ Quick and easy installation with lightweight components.

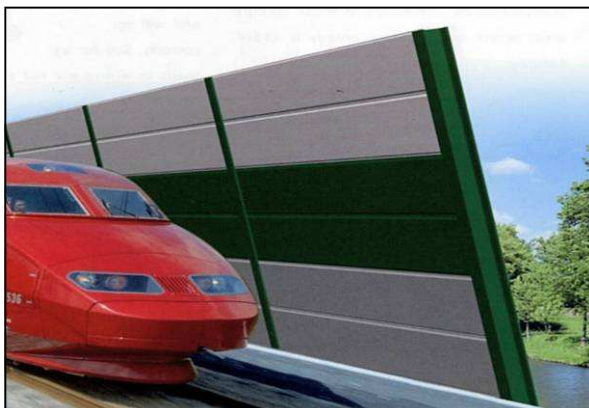


Decoroc® Colours

1015 LIGHT IVORY	5003 SAPPHIRE BLUE	6009 FIR GREEN	WHITE
1013 OYSTER WHITE	5010 GENTIAN BLUE	7042 TRAFFIC GREY A	7033 CEMENT GREY
3005 WINE RED	5011 STEEL BLUE	7016 ANTHRACITE GREY	9006 WHITE ALUMINIUM
5007 BRILLIANT BLUE	5020 OCEAN BLUE	8022 BLACK BROWN	5008 GREY BLUE
5002 ULTRAMARINE BLUE	7031 BLUE GREY	8016 MAHOGANY BROWN	7026 GRANITE GREY

Note:

The colour reproduction may vary slightly from the original due to the limitations of the printing process.



Phi Ireland

engineering for the environment

Phi (Ireland) Ltd.



**Cyclefoam®
Noise Barrier**

Phi (Ireland) Ltd. provides full design, supply and installation service on all our products.

Our experienced design teams and installation crews provide clients and contractors with optimum peace of mind and minimum risk.

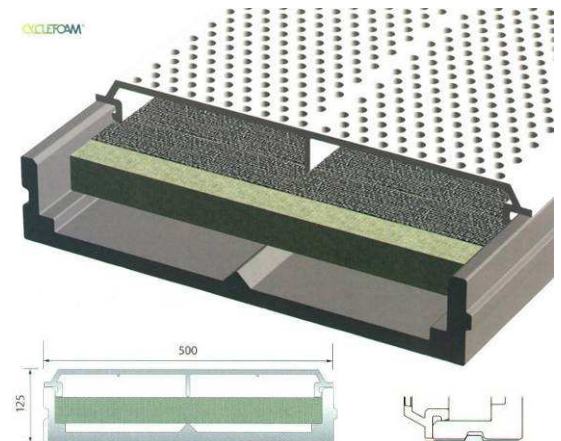
Description

The Cyclefoam® is a high performance noise insulating and sound absorbing noise barrier system that is manufactured from Cyclefoam® panels. Acoustic performance conforms to EN 1793.

Cyclefoam® is a raw material based on recycling PVC building construction waste, such as windows, pipes etc..

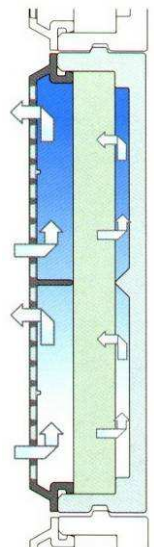
The rockwool/glasswool acoustic panel core, sandwiched between Cyclefoam® panels provides the sound absorbing capabilities. The noise barrier is built by linking the Cyclefoam® panels between H-section posts.

Panels can be coated with the revolutionary and patented Decoroc® coating in a wide range of colours. This coating has strong colour resistance, is impact resistant, has excellent chemical resistance and offers low maintenance with anti graffiti characteristics.



Uses

- φ Highway verges and reservations.
- φ Railway stations and tracksides.
- φ Airports and heliports.
- φ Residential developments.
- φ Sports and recreation grounds.
- φ Theme parks.
- φ School Playgrounds.
- φ Industrial & Commercial zones.



Acoustic Performance

The Cyclefoam® noise barrier has excellent noise reduction characteristics. The panels are provided with cylindrical perforations that avoid resonances and lead to enhanced acoustical performances. The hollow sections around the rockwool noise absorbent core ensure maximum noise absorption.

To avoid possible sound leakages, gaskets can be provided between the panels and also in the vertical posts.

The built in tongue and groove connection between the panels ensures a perfect sound tight connection.

Airborne Noise Insulation

This system is designed to provide adequate sound insulation so sound transmitted directly through the wall is not significant compared with sound diffracted over the wall.

Sound Absorption

This system is designed to be effective as sound absorbing devices on the noisy side to reduce additional noise nuisance caused by reflected noise (NRC = 0.8 dB). Circumstances in which this treatment may be required include:

- φ Noise barriers, rocks or retaining walls that can reflect sound towards unprotected areas.
- φ Vertical cuttings or where reflective surface face each other.
- φ Tunnels and their approaches.
- φ Traffic passing close to barrier where reflection between vehicle and barrier may reduce effectiveness.

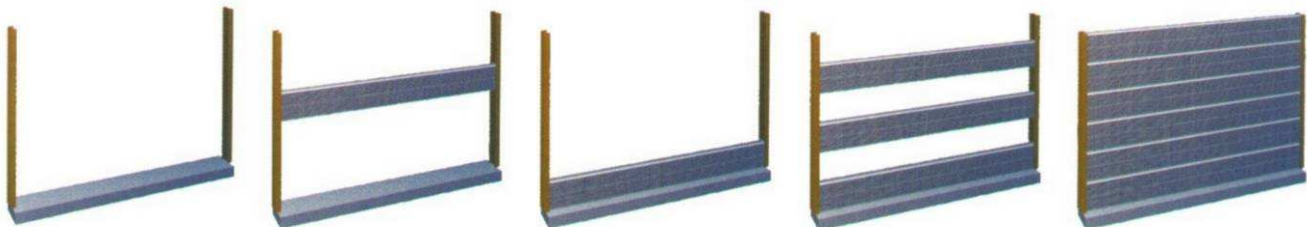
Typical Configurations

The Cyclefoam® Panel are supplied in standard lengths of 2, 3 and 4 metres. The panels can be cut easily if required. These panels can be installed either vertically or horizontally, between steel H posts. Details of both these configurations are shown in the sketches below. Clamping profiles can be used to secure the panels in position.

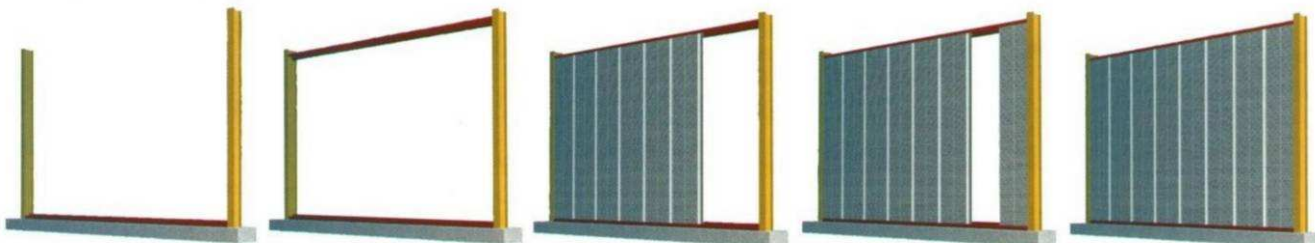
The size and type of H post required in dependant on the design wind loading and other loading factors.



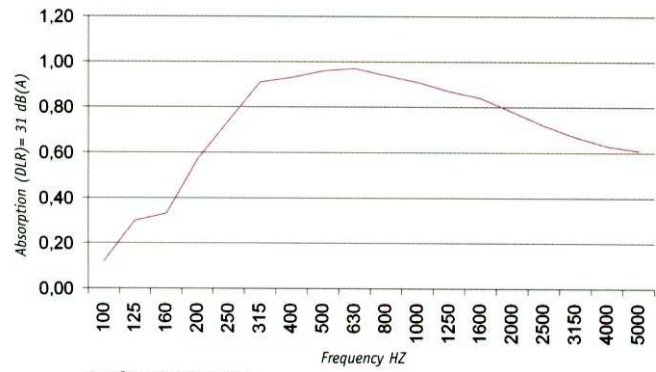
Horizontal installation



Vertical installation

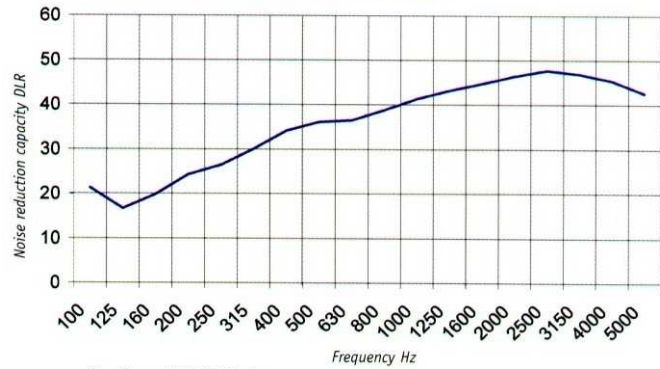


ABSORPTION DL_{α} 8-12 DB



Conform EN 1793-1

NOISE REDUCTION (DL_R) 31dB



Conform EN 1793-2